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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,795	04/13/2006	Andreas Przada	14219-114US1 P2003,0720US	3560
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			EXAMINER JONES, STEPHEN E	
			ART UNIT 2817	PAPER NUMBER
			MAIL DATE 01/25/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,795

Applicant(s)

PRZADKA, ANDREAS

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7-15 and 18 is/are rejected.
- 7) ☒ Claim(s) 2,3,6,16 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/13/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 4/13/06, 10/19/06.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 8, 10-15, and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Huntington et al.

Huntington teaches a transformer including: a 1st and 2nd conductor planes (12,14); a ceramic substrate (10) (see Col. 2, lines 59-63) has the conductor layers on its opposite sides (i.e. it is a multilayer ceramic substrate with the ceramic being the intermediate layer) (Claim 11); an interlayer via (5) contact is plated in the ceramic to make contact between the two conductors (Claim 14); inherently the conductors have a predetermined length to provide the impedance transformation (and see Col. 4); the conductors are in bent over greek fret form (e.g. see Fig. 1) (Claim 13); the conductors have segments joined at right angles and they overlap; inherently the overlap of the conductors could be designed to be overlapping in less locations (i.e. they are adjustable in the design process in the same manner as the present invention and especially since nothing in the present invention appears to be adjustable after it is made (Claims 1, 5, 10); the conductors can be 1/4 length (see Col. 4, lines 26-30) (Claim 8, 15); and inherently the device is capable of operating with acoustic waves and

providing support for a component especially since it is the same structure as the presently claimed invention (Claims 12,18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huntington et al.

Huntington et al. teaches a transformer as described above, but does not explicitly teach 50 ohms impedance.

It is well-known in RF circuitry that 50 ohms is a conventional impedance.

Accordingly it would have been considered obvious to one of ordinary skill in the art to have modified the Huntington device to have the conductors be 50 ohms

matching, because it would have been a mere optimization of the circuit to match impedance based on the predetermined impedance of the devices that the transformer is providing matching.

Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huntington et al. in view of Stengel

Huntington et al teaches a transformer as described above, but does not teach a tri-plate configuration with grounding/shielding plates separated from the conductors by additional ceramic layers.

Stengel teaches a transformer and provides the general teaching of additional layers for spacing ground layers from the top and bottom surfaces for providing additional shielding (e.g. see Col. 3, lines 36-39).

It would have been considered obvious to one of ordinary skill in the art to have modified the Huntington device to have included additional ceramic layers on the top and bottom to add spaced shielding layers from the conductors such as taught by Stengel, because it would have provided the advantageous benefit of isolation from external influences, thereby suggesting the obviousness of such a modification.

Claims 1, 5, 8, 9, 10, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apel et al.

Apel teaches a transformer including: conductor layers spaced apart by an intermediate dielectric layer (see col. 2, lines 47-49); the conductors can be meandering (e.g. see Col. 3, lines 6-10, i.e. they have right angles); plated vias connect the two conductors through the intermediate layer (28) (Claim 14); inherently the overlap of the

conductors could be designed to be overlapping in less locations (i.e. they are adjustable in the design process in the same manner as the present invention and especially since nothing in the present invention appears to be adjustable after it is made (Claims 1, 5, 10, 15); and inherently the device is capable of operating with acoustic waves and providing support for a component especially since it is the same structure as the presently claimed invention.

However, Apel does not explicitly teach that the dielectric inter layer is ceramic (Claim 1); that the conductors are $\frac{1}{4}$ wavelength (Claim 8) or 50 ohm (Claim 9); or a greek fret pattern (Claim 13).

It would have been considered obvious to one of ordinary skill in the art to have modified the Apel device to have the dielectric be ceramic, the conductors be 50 ohm matching and $\frac{1}{4}$ wavelength, and to have the meander be Greek fret patterned, because: ceramic would have been a mere selection of a well-known specific dielectric material for the generic dielectric in the Apel device; Greek fret would have been a mere selection of a well-known specific meandering pattern; and 50 ohm and $\frac{1}{4}$ wavelength are well-known lengths and impedance for RF devices based on the pre-selected frequencies and devices to be matched and thus such characteristics would have been a mere optimization of the electrical characteristics of the device as applied in a selected circuit application.

Claims 4, 7, 11, 12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apel et al. as applied to claim 1 above, and further in view of Stengel.

Apel teaches a transformer as described above, but does not explicitly teach a tri-plate configuration with grounding/shielding plates separated from the conductors by additional ceramic layers.

Stengel teaches a transformer and provides the general teaching of additional layers for spacing ground layers from the top and bottom surfaces for providing additional shielding (e.g. see Col. 3, lines 36-39).

It would have been considered obvious to one of ordinary skill in the art to have modified the Apel device to have included additional ceramic layers on the top and bottom to add spaced shielding layers from the conductors such as taught by Stengel, because it would have provided the advantageous benefit of isolation from external influences, thereby suggesting the obviousness of such a modification.

Allowable Subject Matter

Claims 2-3, 6, and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 9 AM to 5 PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SEJ


STEPHEN E. JONES
PRIMARY EXAMINER